

What is claimed is:

1. An optical pickup comprising:

a synthetic resin-made base in which a collimator lens and an objective lens are disposed at one end opening of a light passage hole with a half mirror, the base having a mounting
5 surface formed on another end opening of the light passage hole that is penetrating the base;

a laser diode disposed in a laser hole communicating with the light passage hole;

10 a resilient plate made of a leaf spring having a central through hole, a first end portion secured to the mounting surface in such a manner as to be heightwise adjustable by an adjusting screw, a pair of left and right hinge portions formed by cutting out a slit in the vicinity of a second end portion that is opposite
15 to the first end portion, and a pair of left and right leg portions formed integrally at both side edge portions of the second end portion, the leg portions extending toward the first end portion along a horizontal longitudinal direction; and

a printed circuit board with a photodiode, the printed
20 circuit board secured to the resilient plate in face-to-face relation to the central through hole while being positioned in the horizontal longitudinal direction and a horizontal transverse direction;

wherein laser light is projected from the laser diode onto
25 a disk through the half mirror, the collimator lens, and the

objective lens, and reflected light thereof is received by the photodiode through the half mirror and the central through hole in the resilient plate, so as to read information recorded on the disk;

5 a pair of fixing holes are respectively formed in the leg portions in such a manner as to be provided on a transverse phantom line passing through a central portion of the resilient plate and at positions spaced apart an equal interval from a longitudinal phantom line passing through the central portion
10 of the resilient plate and extending in the horizontal longitudinal direction;

 a pair of threaded holes are formed in the mounting surface in such a manner as to be provided on a transverse phantom line passing through a central portion of the base and extending
15 in the horizontal transverse direction and at positions spaced apart an equal interval from a longitudinal phantom line passing through the central portion of the base and extending in the horizontal longitudinal direction;

 an elongated engaging hole is penetratingly provided in
20 one of the leg portions along the horizontal longitudinal direction;

 an elliptical positioning projection is projectingly provided on the mounting surface in face-to-face relation to the engaging hole;

25 a support pedestal which is one step higher is integrally

formed at an end portion of the mounting surface;

the resilient plate and the leg portions are positioned on the mounting surface by engaging the positioning projection with the engaging hole; and

5 fixing screws are respectively screwed into the threaded holes through the fixing holes in the leg portions, so as to fix the leg portions to the mounting surface and press the second end portion of the resilient plate against the support pedestal.

10 2. An optical pickup comprising:

a synthetic resin-made base having a mounting surface formed thereon;

a resilient plate made of a leaf spring having a central through hole and a first end portion secured to the mounting
15 surface in such a manner as to be heightwise adjustable by an adjusting screw;

a printed circuit board with a photodiode, the printed circuit board secured to the resilient plate in face-to-face relation to the central through hole while being positioned
20 in a horizontal longitudinal direction and a horizontal transverse direction; and

a laser diode;

wherein laser light is projected from the laser diode onto a disk, and reflected light thereof is received by the photodiode,
25 so as to read information recorded on the disk;

a pair of fixing holes are formed in the resilient plate in such a manner as to be provided at positions spaced apart an equal interval from the central through hole interposed between the fixing holes;

5 a pair of threaded holes are formed in the mounting surface in face-to-face relation to the fixing holes; and

fixing screws are respectively screwed into the threaded holes through the fixing holes in the leg portions, so as to fix the resilient plate to the mounting surface.

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3. The optical pickup according to claim 2, wherein the resilient plate comprises a pair of left and right leg portions formed integrally at both side edge portions of a second end portion that is opposite to the first end portion, the leg portions
15 extending toward the first end portion along the horizontal longitudinal direction,

wherein the pair of fixing holes are respectively formed in the leg portions.

20 4. The optical pickup according to claim 3, wherein a support pedestal which is one step higher is integrally formed on an end portion of the mounting surface;

and the leg portions are fixed to the mounting surface so as to press the second end portion of the resilient plate
25 against the support pedestal.

5. The optical pickup according to claim 3, wherein an elongated engaging hole is penetratingly provided in one of the leg portions along the horizontal longitudinal direction;

an elliptical positioning projection is projectingly
5 provided on the mounting surface in face-to-face relation to the engaging hole; and

the resilient plate and the leg portions are positioned on the mounting surface by engaging the positioning projection with the engaging hole.

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6. The optical pickup according to claim 3, wherein the resilient plate comprises a pair of left and right hinge portions formed by cutting out a slit in the vicinity of the second end portion.

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7. The optical pickup according to claim 6, wherein a photodiode fixing portion of the resilient plate on which the printed circuit board is secured is inclined upward by a predetermined angle with respect to each of the leg portions before being hightwise
20 adjusted by the adjusting screw.

8. The optical pickup according to claim 2, wherein the pair of fixing holes are formed in the resilient plate in such a manner as to be provided on a transverse phantom line passing
25 through a central portion of the resilient plate and at positions

spaced apart an equal interval from a longitudinal phantom line passing through the central portion of the resilient plate and extending in the horizontal longitudinal direction; and

the pair of threaded holes are formed in the mounting surface
5 in such a manner as to be provided on a transverse phantom line passing through a central portion of the base and extending in the horizontal transverse direction and at positions spaced apart an equal interval from a longitudinal phantom line passing through the central portion of the base and extending in the
10 horizontal longitudinal direction.

9. The optical pickup according to claim 3, wherein the pair of fixing holes are formed in the resilient plate in such a manner as to be provided on a transverse phantom line passing
15 through a central portion of the resilient plate and at positions spaced apart an equal interval from a longitudinal phantom line passing through the central portion of the resilient plate and extending in the horizontal longitudinal direction; and

the pair of threaded holes are formed in the mounting surface
20 in such a manner as to be provided on a transverse phantom line passing through a central portion of the base and extending in the horizontal transverse direction and at positions spaced apart an equal interval from a longitudinal phantom line passing through the central portion of the base and extending in the
25 horizontal longitudinal direction.